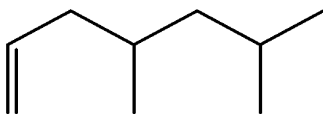


RESPONSE AND REQUEST FOR RECONSIDERATION

Response.

Claim Objection

The examiner had objected to claim 10 in that he believed that the terms “propylene trimers” and the like should actually be termed monomers. Actually, the terminology is correct. The names “propylene trimers” and the like are established terms of art which refer to the olefins which are prepared by trimerization (or dimerization or tetramerization) of propylene (or isobutylene). “Propylene trimer” is the common name for a branched nonene prepared from propylene, e.g.:



Similarly, “propylene tetramer” is a name for branched dodecene, and isobutylene dimers, trimers, and tetramer are branched octanes, dodecenes, and hexadecenes, respectively. This common terminology is confirmed by its use in the Kirk-Othmer Encyclopedia of Chemical Technology, Third Edition (1978) vol. 2 page 82 (pdf copy attached), where diisobutylene, propylene trimer, and propylene tetramer are each referred to as olefins (suitable for use in manufacture of alkylphenols).

Accordingly, it is requested that the objection to claim 10 be removed.

Rejection Under 35 USC 103

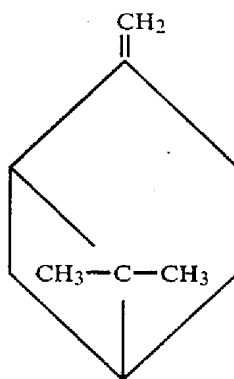
The Examiner has rejected all claims as made obvious by the disclosure of Chen et al. in view of Johnson et al., or, as to some claims, in combination with Johnson et al. and Tipton.

With regard to the combination of Chen with Johnson, Applicants had argued in the response submitted September 12, 2006, that one would not look to Johnson to obtain the low molecular weight mixed dimers and trimers of the present invention, as Johnson prepares relatively high molecular weight polymers. The Examiner had objected that the argument was not persuasive, specifically because a low molecular weight limitation for the adducts did not appear in the claims.

The present claims are now directed to low molecular weight dimeric or oligomeric adducts, that is, addition products comprising a dimer or oligomer containing up to 4 total units of (a) and (b) monomers. Claim 27 further specifies that the addition product comprises a dimeric product being the 1:1 mole adduct of (a) and (b). It is believed that this limitation should overcome the Examiner’s objection.

None of these dimeric, trimeric, or tetrameric adducts are suggested by Johnson. Johnson discloses a method for preparing high vinylidene polyisobutylene having an M_n of at least 1500 (col. 1 line 7 and col. 3 line 56). Polyisobutylene of molecular weight 1500 will consist of about 26 monomer units, which is far removed from the 4 total monomer units presently claimed. Moreover, the specific teaching of olefin/styrene copolymers, found in col. 7 lines 43-45, is of a copolymer of 95% by weight isobutylene with 5% by weight of styrene. This corresponds to 97.2 mole % isobutylene and 2.8 mole % styrene, or a copolymer of at least 35 isobutylene monomer units for each styrene monomer. This is also very far removed from the presently claimed adducts containing at most 4 monomer units total. There is no motivation, based on the long chain polymers of Johnson, to arrive at the compositions comprising very short mixed dimers, trimers, or tetramers of the present invention.

Additionally, the Examiner's stated reasons for the motivation to combine the teachings of Chen and Johnson appears to be faulty. Chen seeks to oligomerize monocyclic or bicyclic olefins to prepare traction fluids having high traction coefficients. In an example, β -pinene is copolymerized with isobutylene.



β -Pinene

It appears to be the Examiner's contention that, since it is known that isobutylene can also be copolymerized with a small amount of styrene, it would be obvious to polymerize isobutylene with styrene with the expectation that such a (long chain) product would be a useful traction fluid having a high traction coefficient. This supposition is groundless. Johnson indicates that his polymers may be useful in the field of lubricating oil additives. The context of this statement is first made in connection with discussion of the Boerzel reference in column 1. Here it specifically states that such a polymer may be reacted with maleic anhydride and then, in turn, with polyamines, to form products [i.e., known as dispersants] useful as lubricating oil additives. See also column 6, line 7, where again there is mention that the imide derivatives may be used as additives for lubricants. There is simply no indication that the polymers of Johnson, by

themselves, even if they were modified to be only short chain oligomers, would be useful for the purpose sought by Chen, preparing a traction fluid. Also, it should be apparent that the carbon architecture of β -pinene is significantly different from that of the styrene employed by Johnson, making it even less reasonable to postulate utility as Chen's traction fluid.

Accordingly, it is submitted that the claimed subject matter of claim 1 is unobvious. The other independent claim, 22, is unobvious for the same reasons. Each of the dependent claims, being narrower than the independent claims from which they depend, is likewise unobvious.

Conclusion.

For the foregoing reasons it is submitted that the present claims are in condition for allowance. The foregoing remarks are believed to be a full and complete response to the outstanding office action. Therefore an early and favorable reconsideration is respectfully requested. If the Examiner believes that only minor issues remain to be resolved, a telephone call to the Undersigned is suggested.

Any required fees or any deficiency or overpayment in fees should be charged or credited to deposit account 12-2275 (The Lubrizol Corporation).

Respectfully submitted,

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